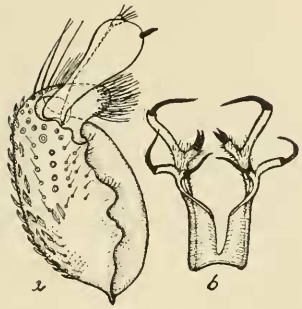

Fig. 1.

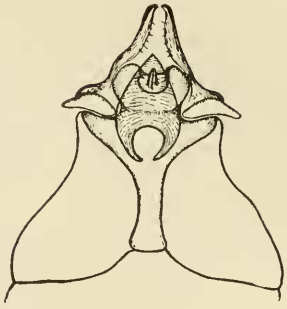

Fig. 2.

Explanation of Figures.

Fig. 1a. Side-piece of hypopygium of *P. horridus*, dorsal view.
b. The claspettes, dorsal view. Both drawn to the same magnification.
Fig. 2. Dorsal (lower) view of the phallosome, tenth sternites and ninth segment of the hypopygium of *P. horridus*.

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Dyar, H. G. Proc. U. S. Nat. Mus., 62, 36. 1922.
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Felt, E. P. Bull. 97, N. Y. State Museum, 471, Fig. 2, plate V. 1904.

DESCRIPTIONS OF FIVE PARASITIC HYMENOPTERA.

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The descriptions given below were prepared a number of years ago when the specimens were submitted for identification and are presented at this time in order that the names may be available.

Bruchobius magnus, new species.

Of the described species of *Bruchobius* this new species is more closely allied to *B. colemani* Crawford than to others but it may easily be distinguished from that species by the color of the legs, large size, coppery color, etc. Like *colemani* it differs from the genotype in the better developed knob at the end of the stigmal vein.

Female.—Length, 4 mm. Interocellar line but little shorter than the ocell-ocular line; pedicellum subequal in length with the second joint of funicle, which is distinctly shorter than the first funicle joint; punctation of propodeum

somewhat finer than that of the mesoscutum; marginal vein only a little longer than the postmarginal; stigmal club well developed, its greatest width (with the longitudinal axis of wing) half the length of the rest of the stigmal vein. Bright cupreous, abdomen black with a cupreous luster; body with white hairs; legs beyond coxae rufo-ferruginous, bases and apices of tibiae, and most of the tarsi, white. Wings hyaline; venation pale brown, stigmal club dark brown.

Male.—Length, 2.5 mm. Like the female except for the much shortened abdomen, the basal dorsal middle of which is pale. Stigmal knob somewhat more elongate so its greatest length is with the transverse axis of the wing; marginal and postmarginal veins thicker than in female.

Paratypes show that the white markings on the legs, especially the two anterior pairs, may be greatly reduced or wanting.

Type locality.—Uitenhage, Cape Provence, South Africa.

Allotype locality.—Grahamstown, Cape Provence, South Africa.

Hosts.—*Bruchus pisorum* L., *B. rufimanus* Boh., and *B. cicatricosus* Fahr.

Described from three females and one male from the type locality, reared from *Bruchus pisorum* by J. G. Cuyler under Accession Number Department of Agriculture of South Africa 2757. Also three females and one male (allotype) from the allotype locality reared from *B. rufimanus* by B. B. Wright, under number 2761. Also one female and one male from the same locality reared from *Bruchus cicatricosus* by W. R. Goulde. All material received from Dr. L. Peringuey.

Type, *allotype*, and *paratypes.*—Cat. No. 23112, U. S. N. M.

This species has been intercepted by inspectors of the United States Department of Agriculture engaged in the enforcement of plant quarantines in shipments from Capetown, South Africa, and recorded under number 28362.

Catolaccus fragariae, new species.

This new species runs to the genus *Catolaccus* in Kurdjumov's key[1] and agrees with the characters given. It differs from all the North American species which have been placed in this genus in having a distinct median carina on the base of the propodeum.

Female.—Length 1.5 mm. Head seen from above as wide as the thorax, seen from the side narrowing towards the vertex, longest (antero-posteriorly) at the level of the antennae; face convex; anterior margin of the clypeus rather broadly emarginate; face finely reticulate-punctate dorsally, ventrally with fine striae which converge towards the clypeus; frons and vertex with punctures slightly coarser than those below antennae; vertex narrow; postocellar line distinctly longer than the ocellocular line; antenna with two ring-joints, six funicle joints,

[1]Rev. Russ., 1913, vol. 13, p. 6.

and a three-jointed club which is no wider than the last funicle joint; funicle becoming a little wider apically, the joints all well defined, the first and fourth subequal and a little longer than the fifth and sixth, which are subequal, and a little shorter than the second and third, which are subequal; mesonotum with punctures similar to those on frons and with a few, scattered, fine, white hairs which can only be seen in certain lights; sides of dorsal aspect of propodeum impunctate, median part of propodeum with fine reticulations on a shining surface, lateral sulci distinct, a distinct transverse carina which is angulate medianly and joins with a median longitudinal carina; mesepisternum with umbilicate punctures; apical part of costal cell with scattered hairs; marginal vein somewhat longer than the postmarginal; abdomen shining, slightly longer than the thorax, conic-ovate. Black, sides of propodeum and the abdomen dark metallic green; scape, anterior legs beyond femora, and four posterior legs beyond coxae testaceous with the apices of tibiae whitish; wings hyaline, venation pale brown.

Paratypes indicate that the color of the legs may vary, as in some the anterior femora are testaceous and in others there is a brownish tinge to the posterior femora. The strength of the transverse and longitudinal carinae on the propodeum also varies some but in all specimens they are present.

Male.—Length 1.25 mm. The male agrees well with the above description of the female except that the antennae are more tapering and the club even less differentiated; the abdomen is shorter and black except the first and base of the second tergites, which are yellow.

Type locality.—Knoxville, Tennessee.

Described from five females (one type) and three males (one allotype) reared from *Anthonomus signatus* by S. Marcovitch and sent under his lot number 1.

Type.—Cat No. 24163, U. S. N. M.

Kurdjumov,[2] in his key to the genera of Pteromalidae, states, in reference to the genus Catolaccus, "—none of the American species described under this generic name really belong to it, they are either *Habrocytus* Thoms. or *Zatropis* Crawford." Comparison with specimens of the genotype of *Catolaccus* were not made and there is some uncertainty as to the generic position for this new species. It does not, however, belong to either *Zatropis* or *Habrocytus* as at present understood.

Phanerotoma formosana, new species.

Evidently allied to *Phanerotoma flavida* Enderlein but differing from the description of that species in having the basal part of the abdomen paler, in the third tergite, and in other minor characters.

Male.—Length 4 mm. Head seen from in front about twice as broad as high, eyes prominent; clypeus smooth, convex medianly; malar space somewhat

[2]Rev. Russ., 1913, vol. 13, p. 6.

shorter than width of mandible at base; basal antennal joints lengthened; face transversely striato-reticulate; frons coarsely striato-reticulate dorsad-ventrad; ocelli in an acute triangle, the intraocellar area granular, not surrounded by a well defined furrow; vertex transversely striato-reticulate; posterior orbits slightly receding, but little narrower than width of eyes; occiput deeply, arcuately emarginate posteriorly; scutum punctato-reticulate; notauli poorly defined; suture between scutum and scutellum coarsely foveolate; disk of scutellum punctured, margined laterally, lateral areas of scutellum with strong rugae; propodeum truncate posteriorly, coarsely reticulate and with a few of the lines more prominent; tergites reticulate, more coarsely so basally, the basal carinae strongly converging, extending only to about the middle of the first tergite; first tergal suture straight, foveolate, the second also foveolate but curved anteriorly; third tergite without a median ridge or apical emargination; radius leaving stigma beyond the middle; first abscissa of radius about one third as long as the second. Reddish-yellow; interocellar area and a transverse band behind scutellum brownish; base of abdomen whitish; legs pallid, apex of hind tibia with a brownish spot; wings hyaline; basal venation yellowish, the apical venation darker, stigma dark brown apically, pale basally.

Type locality.—Taihoku, Formosa, Japan.
Type.—Cat. No. 23841, U. S. N. M.
Described from two specimens (one a male and the other without an abdomen) received from T. Shiraki and recorded under his number 152. Material collected by M. Maki and reared from larva of *Glyphodes pyloalis* Walker.

Rhogas narangae, new species.

Differs from *Rhogas japonicus* Ashmead, which it resembles in size and color, in having the first two tergites subequal, in the less prominent ocelli, distinctly receding orbits, etc.

Male.—Length 4.5 mm., length of antennae 5.7 mm. Head seen from the front distinctly converging below; malar space subequal in length with the eye; eyes prominent, oval, their inner margins only slightly emarginate; face punctato-reticulate on a granular surface; front and orbits similarly sculptured; vertex with transverse wrinkles in addition; ocelli not especially prominent, arranged in an acute triangle; occiput completely and strongly margined; orbits strongly receding; antenna longer than body, about 45-jointed, the third and fourth joints subequal; top of pronotum coriaceous and with some transverse raised lines laterally; scutum rather finely reticulate on an opaque surface, the reticulations more distinct posteriorly; scutellum granular, laterally with a few, irregular, longitudinal, raised lines; propodeum granular and with irregular reticulations, the median carina complete for basal half only; mesepisternum irregularly punctato-striate; first three tergites with longitudinal wrinkles on a granular surface, the median carina complete; first two tergites of subequal length; stigma angulate at middle of lower margin; the first and second abscissae of radius subequal; nervulus before middle of cell, but more than four times its length beyond basal. Ferruginous, intraocellar area and irregular stains on

mesoscutum brownish; antennae pale brown; palpi pallid; legs testaceous; wings hyaline, venation yellowish, stigma pallid; second intercubitus obsolescent.

The paratypes show that the sculpture of the vertex may almost lack the raised lines, that the reticulations on the scutum may be nearly lost, and that the propodeum and first two tergites may be marked with brown.

Type locality.—Formosa, Japan.

Type.—Cat. No. 23840, U. S. N. M.

Described from three males (one type) received from T. Shiraki, Taihoku, Formosa, and recorded under his number 124 and said to have been reared from the larva of *Naranga aenescens* Moor.

Rhogas metanastriae, new species.

In general appearance like (*Heterogamus*) *Rhogas thoracicus* (Ashmead) but the black legs will readily separate it from that species. *Chelonorhogas rufithorax* Enderlein is similarly colored but differs in size and structure.

Male.—Length 8.5 mm, length of antennae about 8 mm. Head seen from in front broader than high, not much narrowed below; malar space rather short, subequal to the width of the mandibles; face coarsely granular, with a few irregular transverse raised lines and with a median dorsad-ventrad carina which is better defined dorsally; eyes large, reniform, deeply emarginate; front and posterior orbits finely granular; vertex granular but with a few transverse wrinkles in addition; occipital carina interrupted medianly; ocelli large, arranged in nearly an equilateral triangle, postocellar line slightly longer than the ocelloccipital line and a little shorter than the interocellar line; antennae nearly as long as body, flagellum with about 50 joints of nearly equal length; dorsal surface of pronotum coarsely granular, the posterior margin with a tendency toward reticulations; scutum and prescutum granular, the notauli feebly and irregularly foveolate; median area of scutellum granular, margined laterally; propodeum reticulate and with a nearly complete median carina; mesepisternum opaque, granular with a tendency towards aciculations dorsally; tergites longitudinally striato-reticulate, the striations more pronounced anteriorly, the reticulations posteriorly, the first two, as well as base of third, with a median carina; radius leaving stigma before middle; first abscissa of radius about half as long as second; nervulus in middle of cell. Head and thorax rufous, abdomen black; palpi, intraocellar area, antennae, legs, and dorsal part of propodeum black; body with short silvery hair; wings hyaline; venation dark brown.

Paratype *a* has the propodeum almost entirely rufous, and is so pinned that the posterior part of the prescutum and scutum can be seen to be reticulato-granular. Paratype *b* also has the propodeum mostly rufous.

Type locality.—Taihoku, Formosa, Japan.

Type.—Cat. No. 23839, U. S. N. M.

Described from three specimens received from T. Shiraki of

the Agricultural Experiment Station of Formosa under his number 131 and said to have been reared by M. Maki from the larva of *Metanastria punctata* Walker. The type is in fair condition, paratype *a* lacks the abdomen and some legs, and paratype *b* lacks all of the legs and head.

MINUTES OF THE 452d REGULAR MEETING OF THE ENTOMOLOGICAL SOCIETY OF WASHINGTON, JANUARY 4, 1934.

The 452d regular meeting of Entomological Society of Washington was held at 8 p. m., Thursday, January 4, 1934, in Room 43 of the new building of the National Museum. Mr. J. S. Wade, president, presided. There were present 35 members and 17 visitors. The minutes of the previous meeting were read and approved.

Under "Reports of Officers," the Corresponding Secretary-Treasurer submitted his report for the calendar year 1933. The report stated that there were 190 members of the Society and that for the year 1933 there had been 119 subscribers. The receipts during the calendar year 1933 were $1,674.67, total expenditures $1,262.07, cash on hand $207.52. Due to bank failure the Society lost $205.02. It was recommended that the Treasurer be authorized to deduct this from his account, keeping a memorandum for possible future claim. The cost of printing of the volume for 1933 was $1,216.54. The estimated receipts for the coming calendar year are $1,552.27. The amount due from members in arrears was $420. After receipt of the report of the Auditing Committee, the report was accepted and the recommendation approved.

A motion was passed that the report, with its recommendation as to writing off the loss from bank suspension, be accepted.

The President announced the appointment of the several committees; the program committee to include Dr. Muesbeck chairman, Dr. Weigel, and Dr. Cory; the committee for resolutions on the death of C. H. Popenoe, to include Mr. Graf, Mr. White, and Dr. Annand; the committee for resolutions on the death of H. F. Wickham to include Mr. Buchanan with whatever assistance he may request (in this case that of Dr. Alexander Wetmore).

Dr. F. Z. Hartzell of New York Experiment Station, Professor Ruggles of Minnesota University, Dr. C. H. Richardson of Iowa State College, Dr. R. Faxon of Puerto Rico, Dr. Stanley Freeborn of California University, and Mr. Milne of Harvard, upon invitation, greeted the society.

Under "Notes and Exhibition of Specimens," Mr. R. E. Snodgrass reported on the recent scientific meetings.

He stated that the Entomological Society program and the dinner were very good, and that the annual public address, given by Doctor Lutz, was especially worth while.

Doctor Porter discussed the economic meetings, noting especially the symposium on spray residue which favored thorough spraying with later washing.

Dr. C. H. Richardson showed charts illustrating action of some inorganic salts in increasing killing action of nicotine. He also stated that nicotine and